

**AMENDMENT AND RESPONSE**

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Serial No.: 09/893,047

Filing Date: 6/27/2001

Attorney Docket No. 100.095US02

Title: TELECOMMUNICATION NETWORK WITH VARIABLE ADDRESS LEARNING,  
SWITCHING AND ROUTING**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of claims:**

1. (Original) A ring network for transporting data packets between network devices, the ring network comprising:

a number of ring switches, each ring switch having at least one ring port, at least one local port and at least one table that self learns which network devices are associated with each port of the ring switch based on a selected source identifier from the packets processed by the ring switch;

the at least one ring port of each ring switch being coupled to a ring port of another ring switch in the ring network;

wherein the ring switch switches data packets between its ring and local ports to direct the data packets to specified network devices associated with the at least one local port of the ring switches in the ring network; and

wherein the ports of the ring switches are configured such that data packets received at the at least one ring port and the at least one local port that are not destined for a network device associated with the at least one local port of the ring switch are switched to another ring switch on the ring network based on the at least one table.

2. (Original) The ring network of claim 1, wherein the selected source identifier comprises a media access control (MAC) address.

3. (Original) The ring network of claim 1, wherein the selected source identifier comprises an Internet Protocol (IP) address.

4. (Original) The ring network of claim 1, wherein the selected source identifier comprises at least a portion of a hierarchical address.

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5. (Original) The ring network of claim 1, wherein the selected source identifier comprises a port number of a universal datagram protocol.
6. (Original) The ring network of claim 1, wherein the selected source identifier comprises a combination of two or more identifiers at the same or different protocol levels for the data packet.
7. (Original) The ring network of claim 1, wherein local ports or selected devices on selected local ports of selected ring switches are associated with a common identifier.
8. (Original) The ring network of claim 7, wherein the common identifier is prepended, postpend, or included in packets.
9. (Original) The ring network of claim 8, wherein the ring switch removes the common identifier before transmitting the packet out the local port.
10. (Original) The ring network of claim 1, wherein the ring switches prepend, postpend or include an identifier to packets that are to be multicast to a number of network devices.
11. (Original) A ring switch for a ring network, the ring switch comprising:
  - at least one ring port that is coupleable to transport data packets in a ring network;
  - at least one local port that is coupleable to at least one local area network or device;
  - at least one table that identifies network devices associated with each port of the ring switch; andwherein data packets received at the at least one ring port that are not destined for a network device associated with any of the at least one local ports of the ring switch are switched

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to another ring switch coupled to the at least one ring port based on the at least one table without the use of a token or encapsulating the packet.

12. (Original) The ring switch of claim 11, wherein the selected source identifier comprises a media access control (MAC) address.

13. (Original) The ring switch of claim 11, wherein the selected source identifier comprises an Internet Protocol (IP) address.

14. (Original) The ring switch of claim 11, wherein the selected source identifier comprises at least a portion of a hierarchical address.

15. (Original) The ring switch of claim 11, wherein the selected source identifier comprises a port number of a universal datagram protocol.

16. (Original) The ring switch of claim 11, wherein the selected source identifier comprises a combination of two or more identifiers at different protocol levels for the data packet.

17. (Original) The ring switch of claim 11, wherein local ports or selected devices on selected local ports of selected ring switches are associated with a common identifier.

18. (Original) The ring switch of claim 17, wherein the common identifier is prepended, postpended, or included in packets.

19. (Original) The ring switch of claim 18, wherein the ring switch removes the common identifier before transmitting the packet out the local port.

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20. (Original) The ring switch of claim 11, wherein the ring switches prepend, postpend or include an identifier to packets that are to be multicast to a number of network devices.

21. (Original) A ring switch for a ring network, the ring switch comprising:

at least one ring port that is coupleable to transport data packets over a ring of ring switches;

at least one local port that is coupleable to at least one local area network or device;

at least one table that stores the identifiers of network devices associated with the at least one ring port and the at least one local port;

wherein the ring switch allows data packets received at the ring port to be retransmitted out the ring port of the switch so that data packets can be forwarded on to other ring switches in the ring network based on the at least one table; and

a circuit associated with the at least one ring port that removes incoming data packets that have a source identifier that corresponds to a network device associated with the at least one local port of the switch.

22. (Original) The ring switch of claim 21, wherein the selected source identifier comprises a media access control (MAC) address.

23. (Original) The ring switch of claim 21, wherein the selected source identifier comprises an Internet Protocol (IP) address.

24. (Original) The ring switch of claim 21, wherein the selected source identifier comprises at least a portion of a hierarchical address.

25. (Original) The ring switch of claim 21, wherein the selected source identifier comprises a port number of a universal datagram protocol.

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26. (Original) The ring switch of claim 21, wherein the selected source identifier comprises a combination of two or more identifiers at the same or different protocol levels for the data packet.

27. (Original) The ring switch of claim 21, wherein local ports or selected devices on selected local ports of selected ring switches are associated with a common identifier.

28. (Original) The ring switch of claim 27, wherein the common identifier is prepended, postpended, or included in packets.

29. (Original) The ring switch of claim 28, wherein the ring switch removes the common identifier before transmitting the packet out the local port.

30. (Original) The ring switch of claim 21, wherein the ring switches prepend, postpend, or include an identifier to packets that are to be multicast to a number of network devices.

31. (Original) A ring switch for a ring network, the ring switch comprising:  
a ring-in port that is coupleable to receive data packets from the ring network;  
a ring-out port that is coupleable to provide data packets to the ring network;  
at least one local port that is coupleable to a local area network;  
at least one table to track the a selected identifier of network devices associated with the ports of the ring switch; and  
wherein the table associates the selected identifier of network devices with the ring-out port when data packets are received at the ring-in port.

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32. (Original) The ring switch of claim 31, wherein the selected identifier comprises a media access control (MAC) address.

33. (Original) The ring switch of claim 31, wherein the selected identifier comprises an Internet Protocol (IP) address.

34. (Original) The ring switch of claim 31, wherein the selected identifier comprises at least a portion of a hierarchical address.

35. (Original) The ring switch of claim 31, wherein the selected identifier comprises a port number of a universal datagram protocol.

36. The ring switch of claim 31, wherein the selected identifier comprises a combination of two or more identifiers at the same or different protocol levels for the data packet.

37. (Original) The ring switch of claim 31, wherein local ports or selected devices on selected local ports of selected ring switches are associated with a common identifier.

38. (Original) The ring switch of claim 37, wherein the common identifier is prepended, postpend, or included in packets.

39. (Original) The ring switch of claim 38, wherein the ring switch removes the common identifier before transmitting the packet out the local port.

40. (Original) The ring switch of claim 31, wherein the ring switches prepend, postpend or include an identifier to packets that are to be multicast to a number of network devices.

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Claims 41 – 74      Cancelled